

Product datasheet for **MC221169**

Tbk1 (NM_019786) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tbk1 (NM_019786) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Tbk1
Synonyms:	1200008B05Rik; AI462036; AW048562
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC221169 representing NM_019786
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAGAGCACCTCCAACCATCTGTGGCTCCTGTCTGATATCCTAGGCCAGGGGGCCACTGCAAATGTCT
 TCCGAGGAAGGCATAAGAAAACCTGGTGATCTCTATGCTGTCAAAGTATTTAATAACATAAGCTTCCTTCG
 CCCAGTGGATGTTCAAATGAGAGAAATTTGAAGTGTAAAAAACTCAATCACAAAAACATTGTCAAGTTA
 TTTGCTATTGAAGAGGAGACAACAACAAGACATAAAGTGCTTATTATGGAGTTTTGTCCCTGTGGGAGTT
 TATACACTGTTCTAGAGGAGCCGTTCAATGCGTATGGACTTCCAGAATCAGAATTTCTCATTGTCTTACG
 AGATGTGGTGGGCGGGATGAATCATCTCCGAGAGAACGGCATAGTGCACCGAGATATCAAGCCAGGCAAC
 ATCATGCGCGTCATAGGGGAGGACGGCCAGTCTGTGTACAACTCACGGATTTCCGCGCCGCTCGAGAGC
 TGGAGGACGATGAGCAGTTTGTGTCTGTACGGCACAGAAGAGTACCTGCATCCGGACATGTATGAAAG
 GGCAGTGTAAAGAAAGGACCATCAGAAGAAGTACGGGGCTACCGTTGATCTGTGGAGTGTGGAGTGACA
 TTCTACCATGCAGCCACGGGGTCTGCTGCGTTTACGACCCTTCGAGGGCCCTCGGAGGAACAAAGAAGTAA
 TGTATAAAATAATCACTGGGAAGCCGTCTGGTGAATATCTGGAGTACAGAAAGCAGAAAACGGACCAAT
 TGACTGGAGTGGAGACATGCCTCTCTCCTGTAGTCTTTCTCAGGGTCTTCAGGCACTGCTTACCCAGTT
 CTTGCAAACATACTTGAAGCTGATCAGGAGAAGTCTGGGGTTTTGACCAGTTCTTTGCAGAGACCAGTG
 ATGTGCTTACCAGATGGTGATCCATGTCTTCTCGCTACAACACATGACGGCGCATAAGATTTACATTCA
 CAGCTATAACACTGCTGCTGTGTCCATGAACTGGTCTATAAACAAACCAAGATTGTTTCCCTCAAATCAA
 GAACCTATCTACGAAGGACGACGCTTAGTCTAGAAGTACGAGGACTAGCCAGCATTTTCTAAAACCA
 CAGAGGAAAATCCTATCTTTGTACGAGCCGGGAACAACACTCAATACCGTAGGACTGAGATGAAAAAT
 TTCCTCCCTAAAATACATCCACGCTATGATCTGGATGGGGACGCCAGCATGGCCAAGGCAGTGACGGGG
 GTTGTGTGCTACGCTGCAGAACTGCCAGTACCCTGCTGCTCTATCAAGAATTAATGCGAAAGGGGTAC
 GGTGGCTGGTTGAACTGGTTAAGGATGATTACAACGAGACCGTCCACAAGAAGACGGAGGTAGTGATCAC
 ACTGGATTTCTGCATCAGGAACATTGAGAAGACTGTGAAAGTGTATGAGAAGTTGATGAAGGTCAACCTG
 GAAGCCGACAGACTGGGTGAGATTTAGACATACACCAAGCTGCTGAGACTTTCCAGTTCTCAGGGAA
 CAATAGAAAGCAGTCTTCAGGACATCAGCAGCAGGCTGTCTCCAGGGGGTGTGGCCGACACCTGGGC
 ACATCAAGAAGGCACGCATCCAAGAGACAGGAATGTAGAAAACTGCAGGTCTGTTGAACTGCATCACA
 GAGATTTACTATCAGTTCAAAAAAGACAAGCAGAACGCAGACTAGCTTATAATGAAGAACAGATCCACA
 AATTTGATAAGCAAAAATTTGATTACCATGCCACAAAAGCAATGAGCCACTTCTCAGAAGAATGTGTAG
 AAAGTATGAAGCGTTTAAAGATAAGTCCGGAAGAGTGGATGAGAAAGATGCTTCATCTTAGGAAGCAGCTG
 TTATCGCTAACTAATCAGTGTTCGATATCGAAGAGGAAGTGTCCAAGTATCAAGACTATACTAACGAGT
 TACAAGAACTCTGCCTCAGAAAATGCTCGCAGCCTCCGGCGGCTCAAGCACGCCATGGCCCCGATCTA
 CCCAGCTCTAACACCTTAGTGGAGATGACTCTTGGTATGAAGAAGTTAAAGGAGGAGATGGAAGGCGTG
 GTTAAGGAGCTGGCCGAGAACAATCATATTTAGAAAGTTTGGGTCTTTAACAATGGATGGTGGCCTTC
 GCAATGTGGACTGTCTTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_019786

Insert Size: 2190 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_019786.4</u> , <u>NP_062760.3</u>
RefSeq Size:	3031 bp
RefSeq ORF:	2190 bp
Locus ID:	56480
UniProt ID:	<u>Q9WUN2</u>
Cytogenetics:	10 D2
Gene Summary:	<p>Serine/threonine kinase that plays an essential role in regulating inflammatory responses to foreign agents (PubMed:10581243, PubMed:15210742, PubMed:15661922). Following activation of toll-like receptors by viral or bacterial components, associates with TRAF3 and TANK and phosphorylates interferon regulatory factors (IRFs) IRF3 and IRF7 as well as DDX3X (By similarity). This activity allows subsequent homodimerization and nuclear translocation of the IRFs leading to transcriptional activation of pro-inflammatory and antiviral genes including IFNA and IFNB (By similarity). In order to establish such an antiviral state, TBK1 form several different complexes whose composition depends on the type of cell and cellular stimuli (By similarity). Thus, several scaffolding molecules including FADD, TRADD, MAVS, AZI2, TANK or TBKBP1/SINTBAD can be recruited to the TBK1-containing-complexes (By similarity). Plays a key role in IRF3 activation: acts by first phosphorylating innate adapter proteins MAVS, TMEM173/STING and TICAM1 on their pLxIS motif, leading to recruitment of IRF3, thereby licensing IRF3 for phosphorylation by TBK1 (By similarity). Under particular conditions, functions as a NF-kappa-B effector by phosphorylating NF-kappa-B inhibitor alpha/NFKBIA, IKBKB or RELA to translocate NF-Kappa-B to the nucleus (By similarity). Restricts bacterial proliferation by phosphorylating the autophagy receptor OPTN/Optineurin on 'Ser-177', thus enhancing LC3 binding affinity and antibacterial autophagy (By similarity). Phosphorylates SMCR8 component of the C9orf72-SMCR8 complex, promoting autophagosome maturation (By similarity). Phosphorylates and activates AKT1 (By similarity). Seems to play a role in energy balance regulation by sustaining a state of chronic, low-grade inflammation in obesity, wich leads to a negative impact on insulin sensitivity (PubMed:23396211).[UniProtKB/Swiss-Prot Function]</p>